



# Digital Preservation Challenges



# WHO is TIMBUS

TIMELESS BUSINESS ◀ ▶ ▷



<b>CMS</b>  Caixa Mágica	<b>DPC</b> 	<b>INESC-ID</b> 	<b>Intel</b> 
<b>iPharro</b> 	<b>KIT</b> 	<b>LIP</b> 	<b>LNEC</b> 
<b>SAP</b> 	<b>SBA</b> 	<b>SQS</b>  Excellence through Independence	<b>WWU</b> 

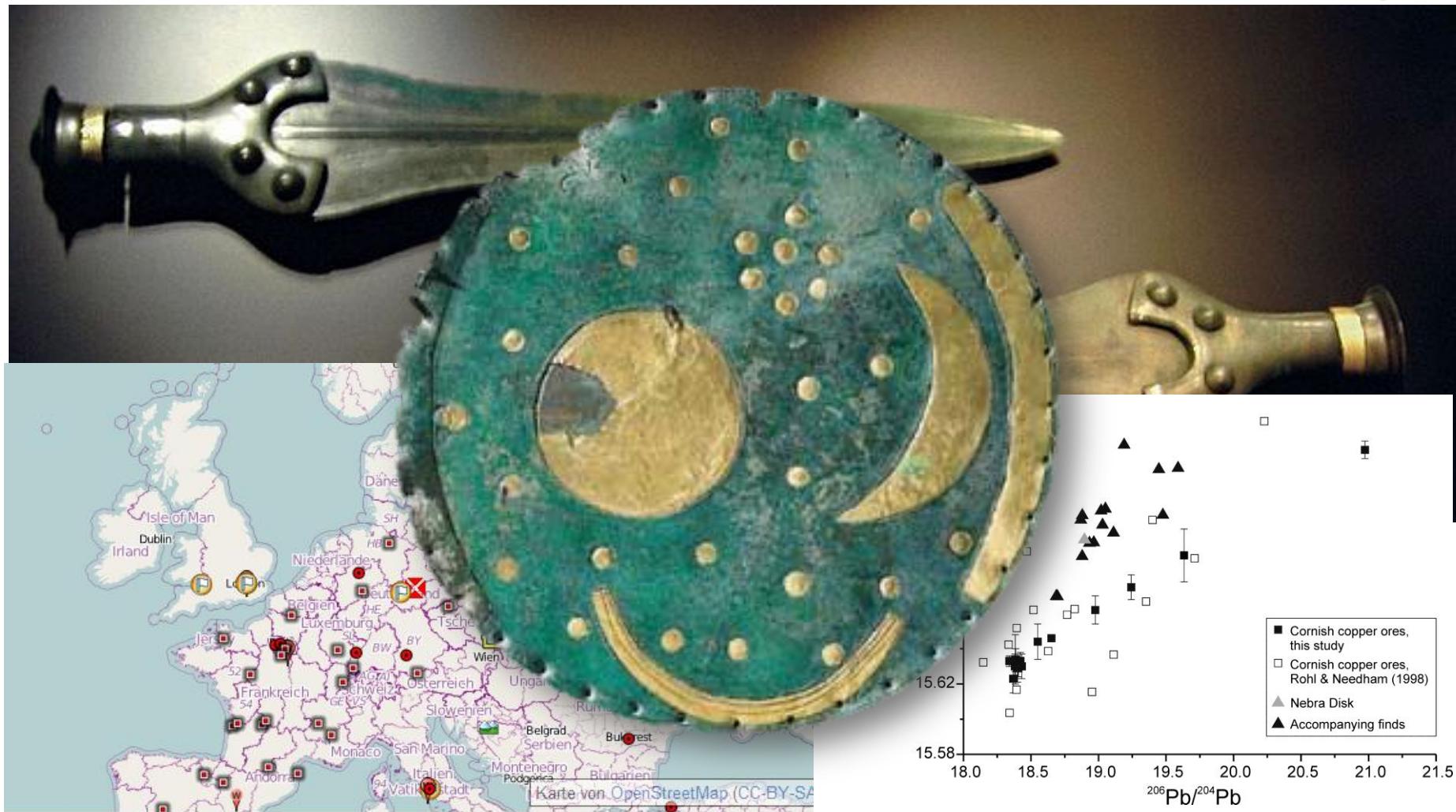
# What is this artefact?

TIMELESS BUSINESS ◀ ▶ ⊞



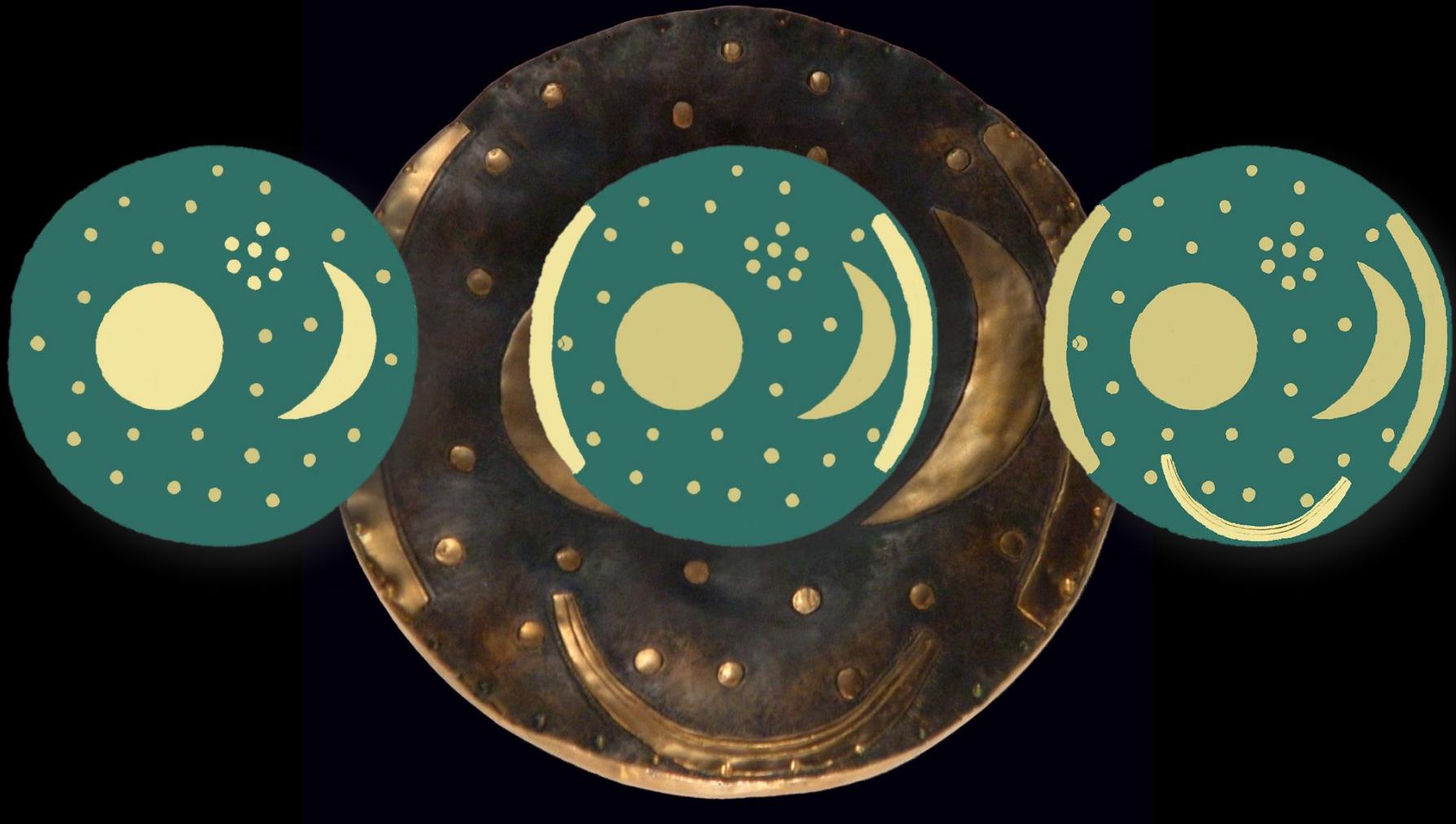
# Context...

TIMELESS BUSINESS ◀ ▶



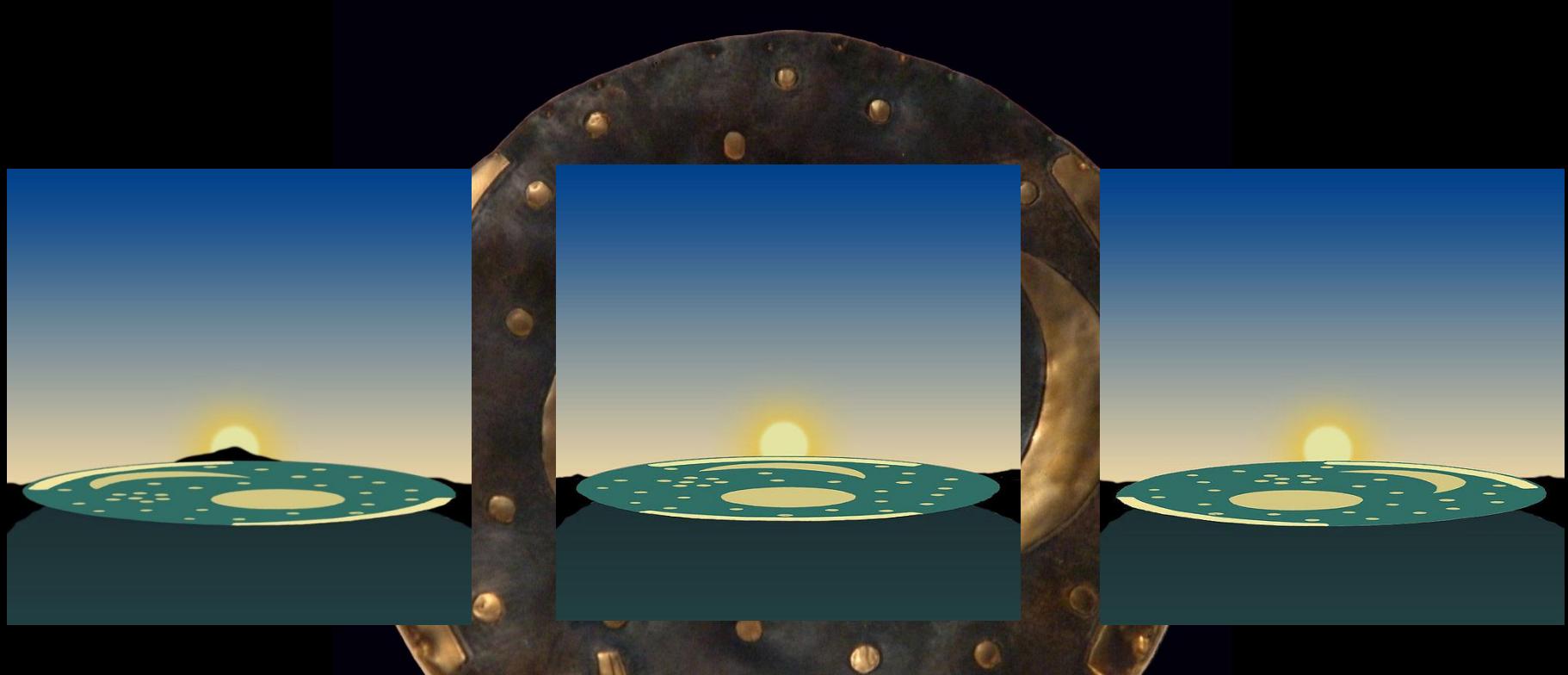
# Three „releases“ of the disk

TIMELESS BUSINESS ◀ ▶ ▷



# Some more context...

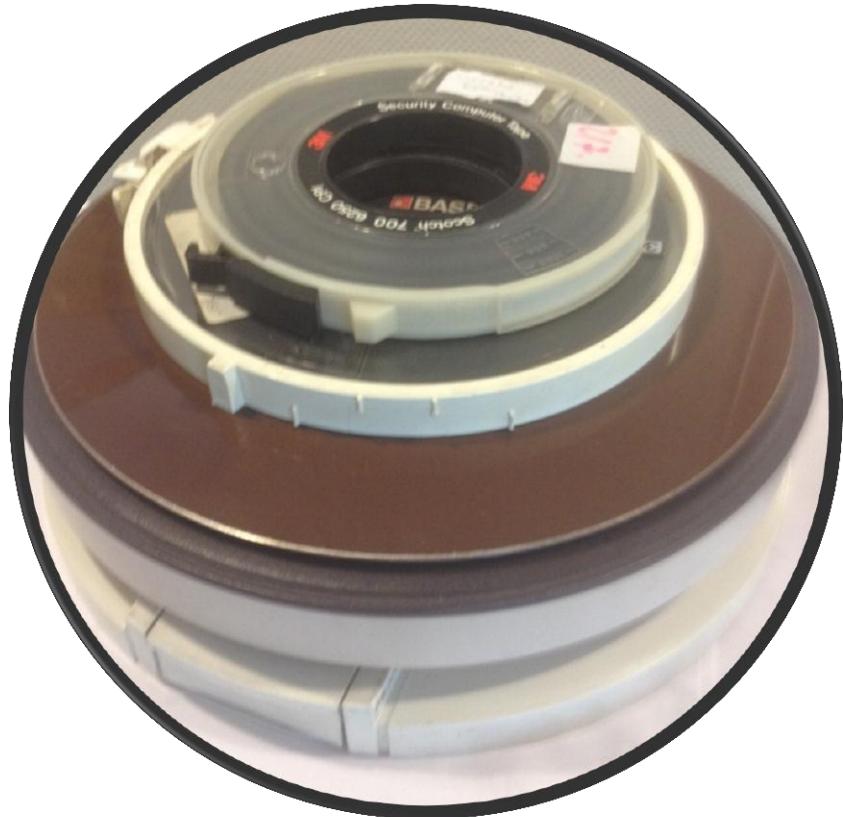
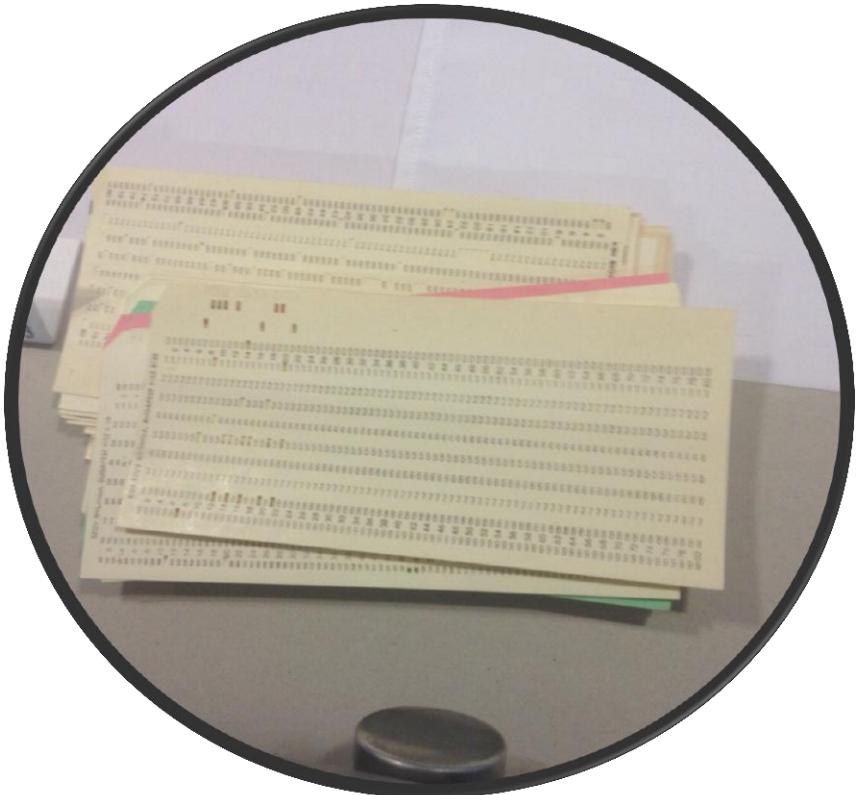
TIMELESS BUSINESS ◀ ▶



Nebra sky disk

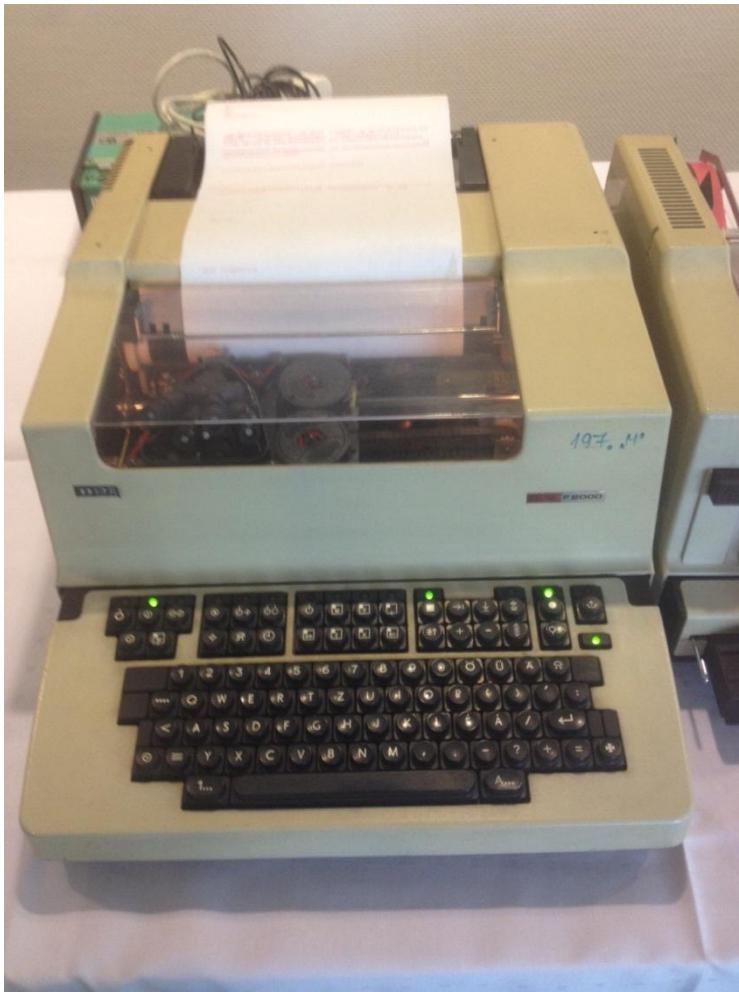
# Our Sky Disks

TIMELESS BUSINESS ◀ ▶



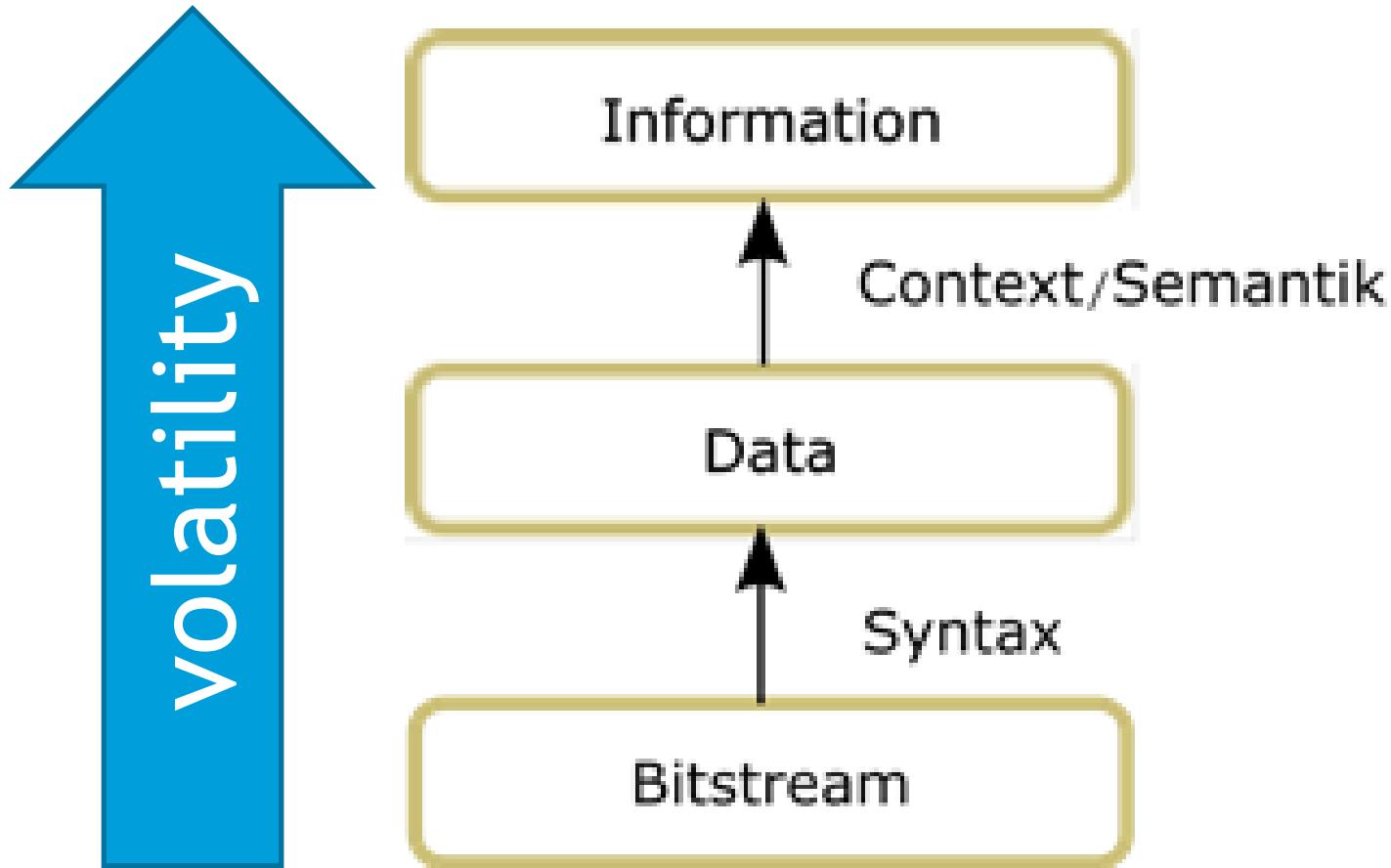
# IT-Museum

TIMELESS BUSINESS ◀ ▶ ⊞



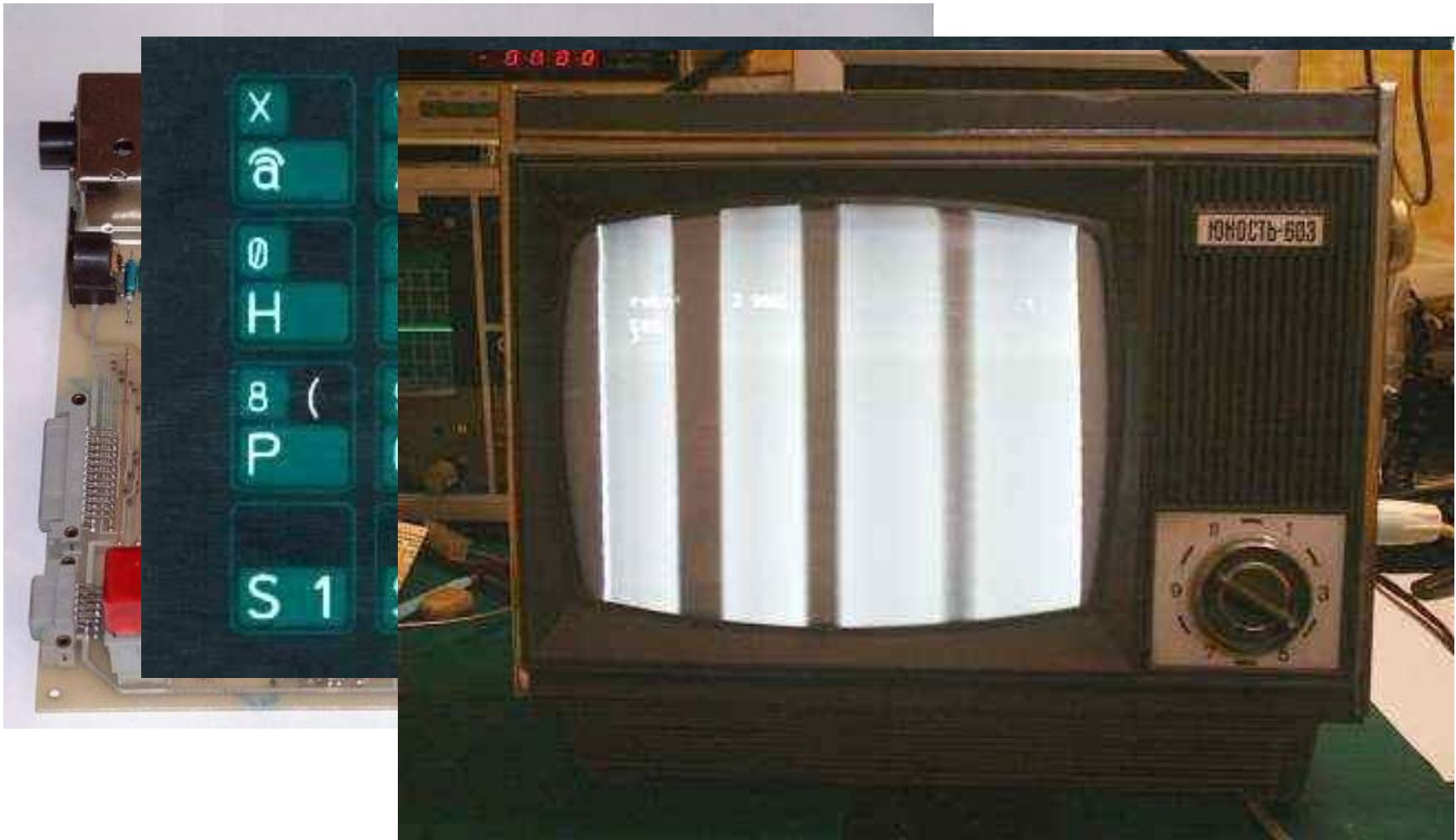
# Digital Dark Ages

TIMELESS BUSINESS ◀ ▶ ⏪



# History is not that far away

TIMELESS BUSINESS ◀ ▶ ▷



# State of the Research

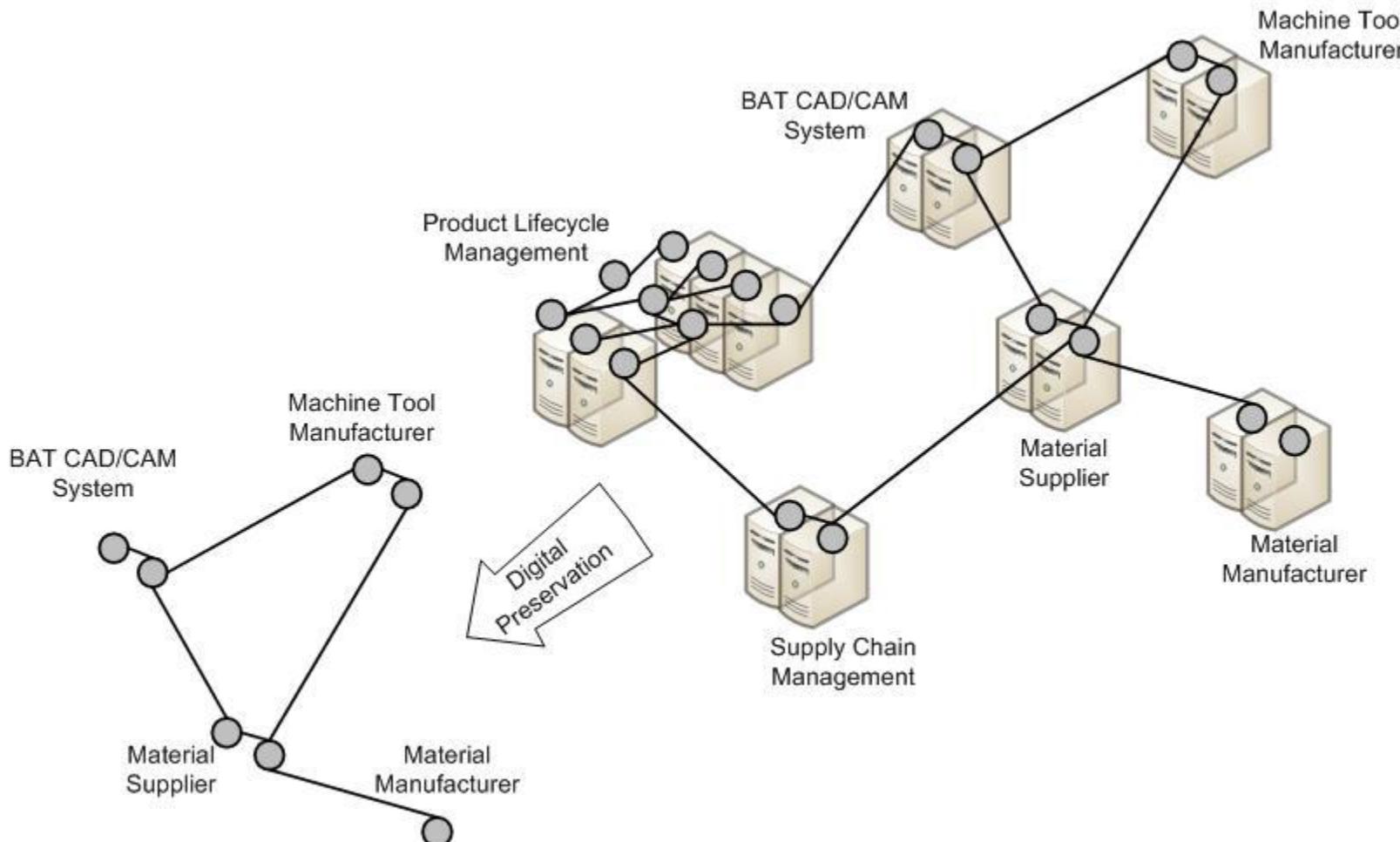
TIMELESS BUSINESS ◀ ▶ ▷



- OAIS as an ISO standard
- Different Research on:
  - FileFormat Databases
  - Ontologies
  - Emulators
  - Transformation
- But...
- ... it's oriented on artefacts

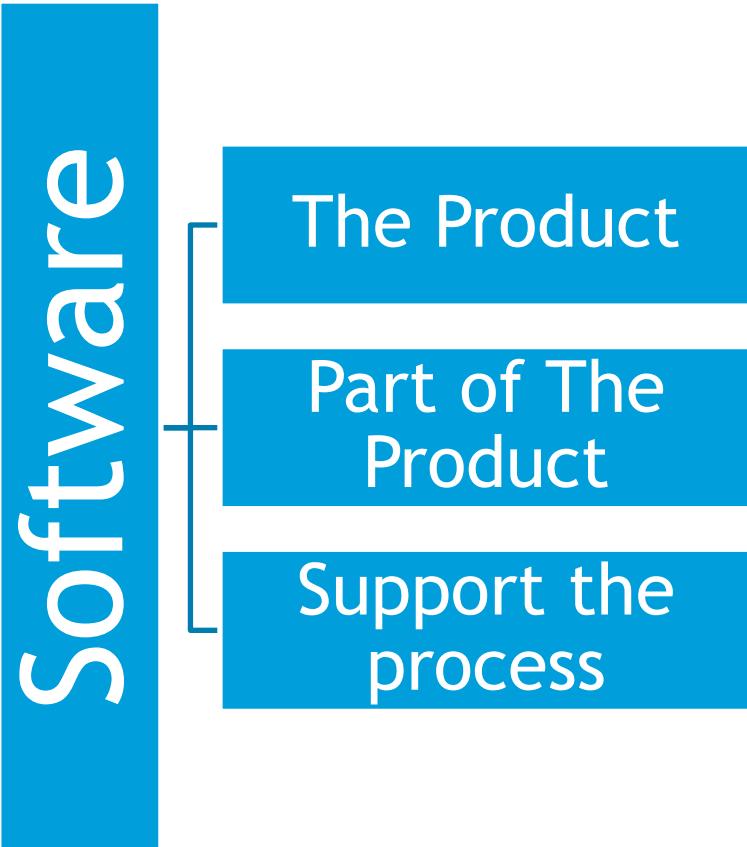
# TIMBUS: How to preserve a process?

TIMELESS BUSINESS ◀ ▶ ▷



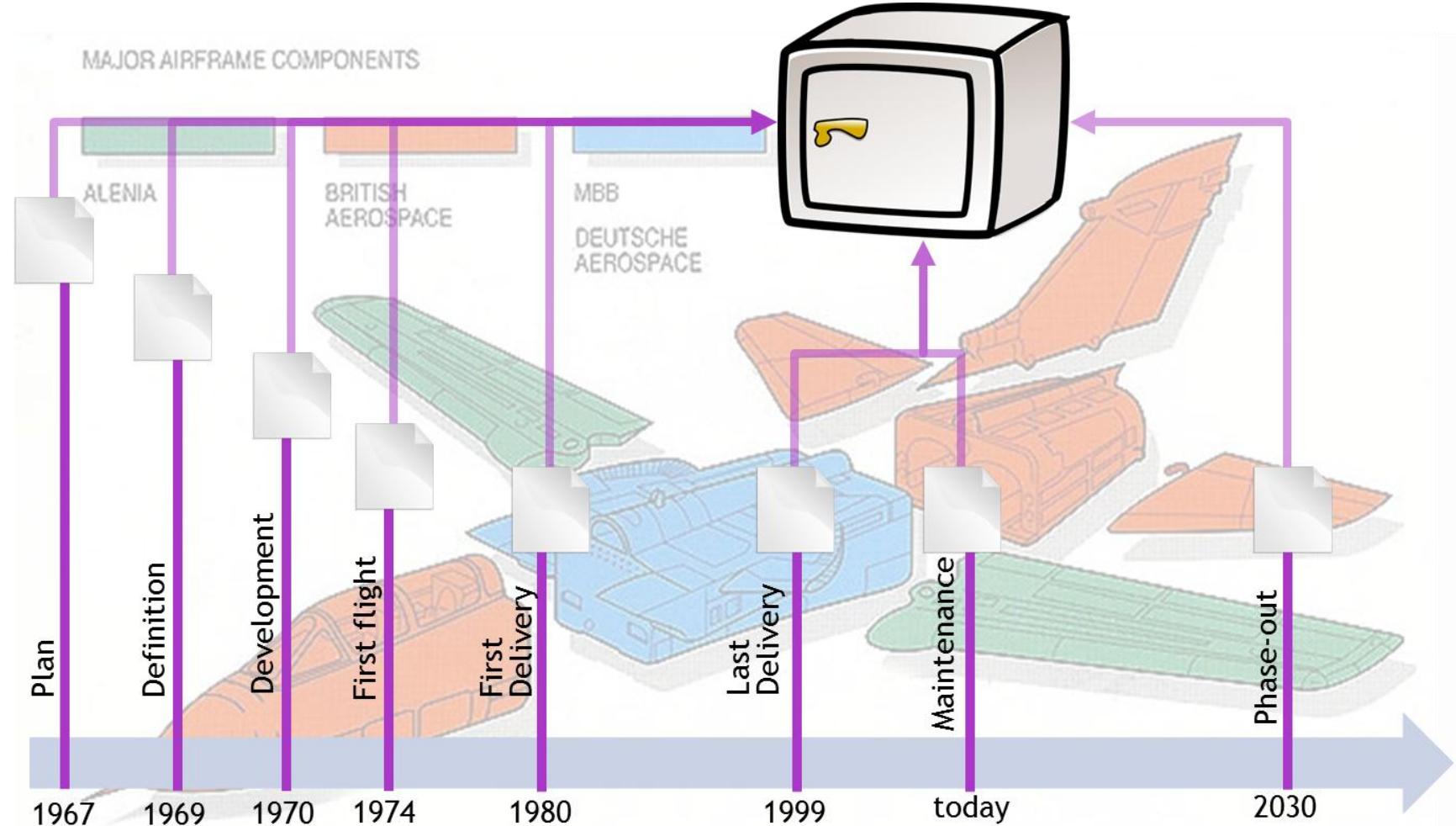
# The role of Software...

TIMELESS BUSINESS ◀ ▶



# History of the Tornado!

TIMELESS BUSINESS ◀ ▶



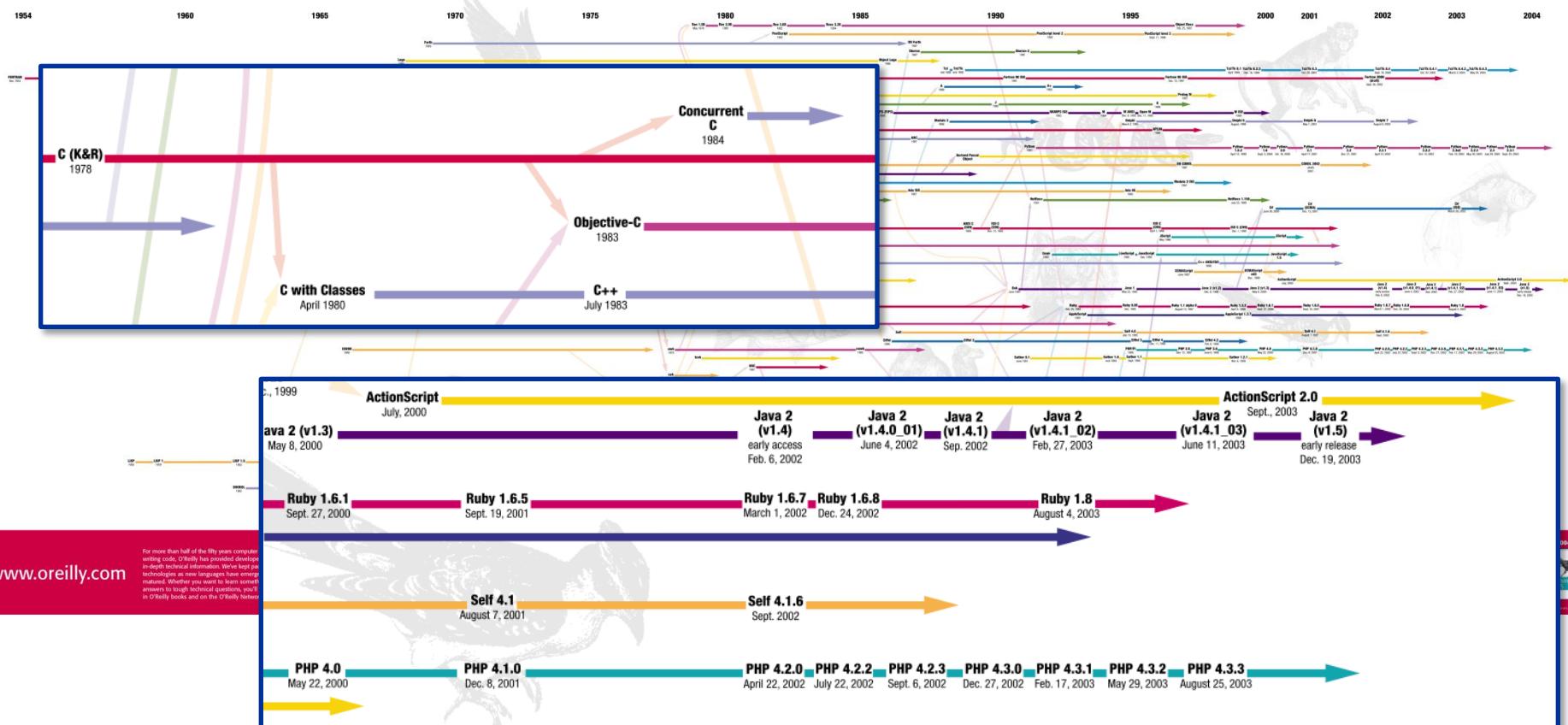
# History of Languages

TIMELESS BUSINESS ◀ ▶ ▷



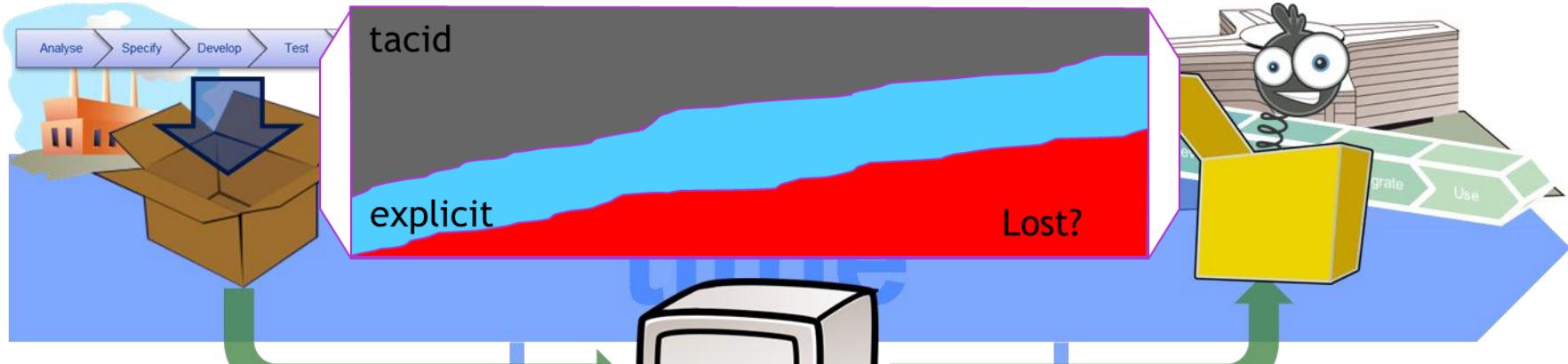
O'REILLY®

## History of Programming Languages



# Communicate with the future

TIMELESS BUSINESS ◀ ▶ ▷



- **Why preserve?**
- **What to capture in which quality?**
- **How to store?**
- **How to keep content readable?**
- **How to identify and assess?**
- **How to re-instantiate?**
- **How to analyse?**

# ISO 25010: Quality in Use

TIMELESS BUSINESS ◀ ▶ ▷

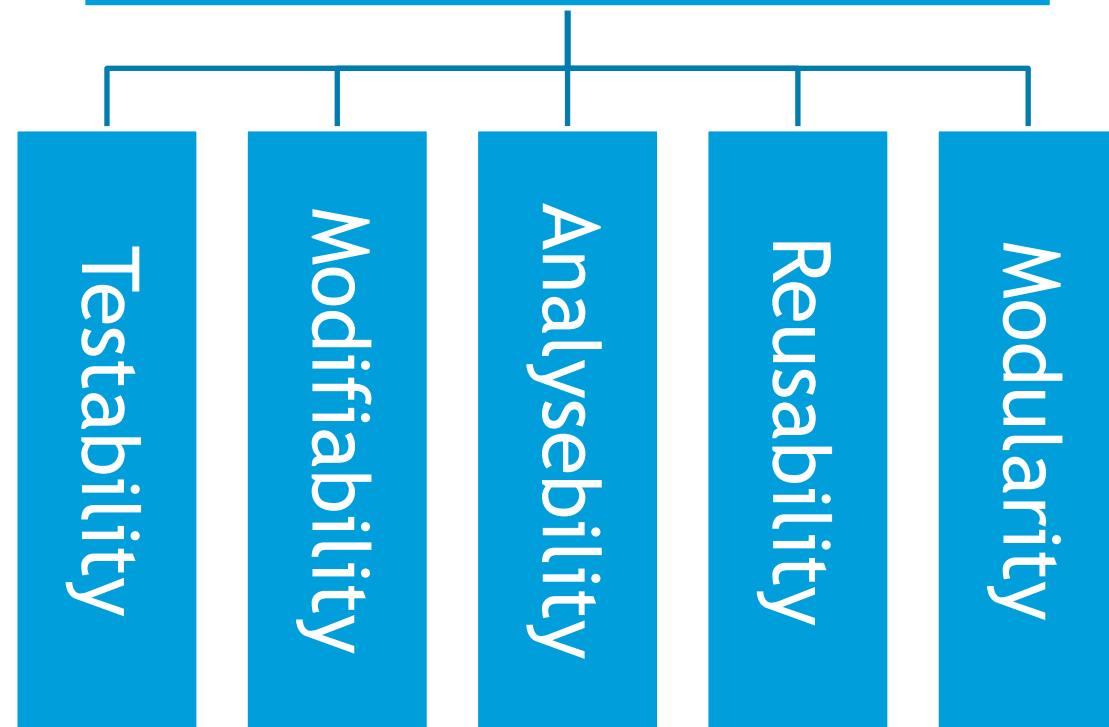


# Maintenance in ISO 250x0

TIMELESS BUSINESS ◀ ▶ ▷

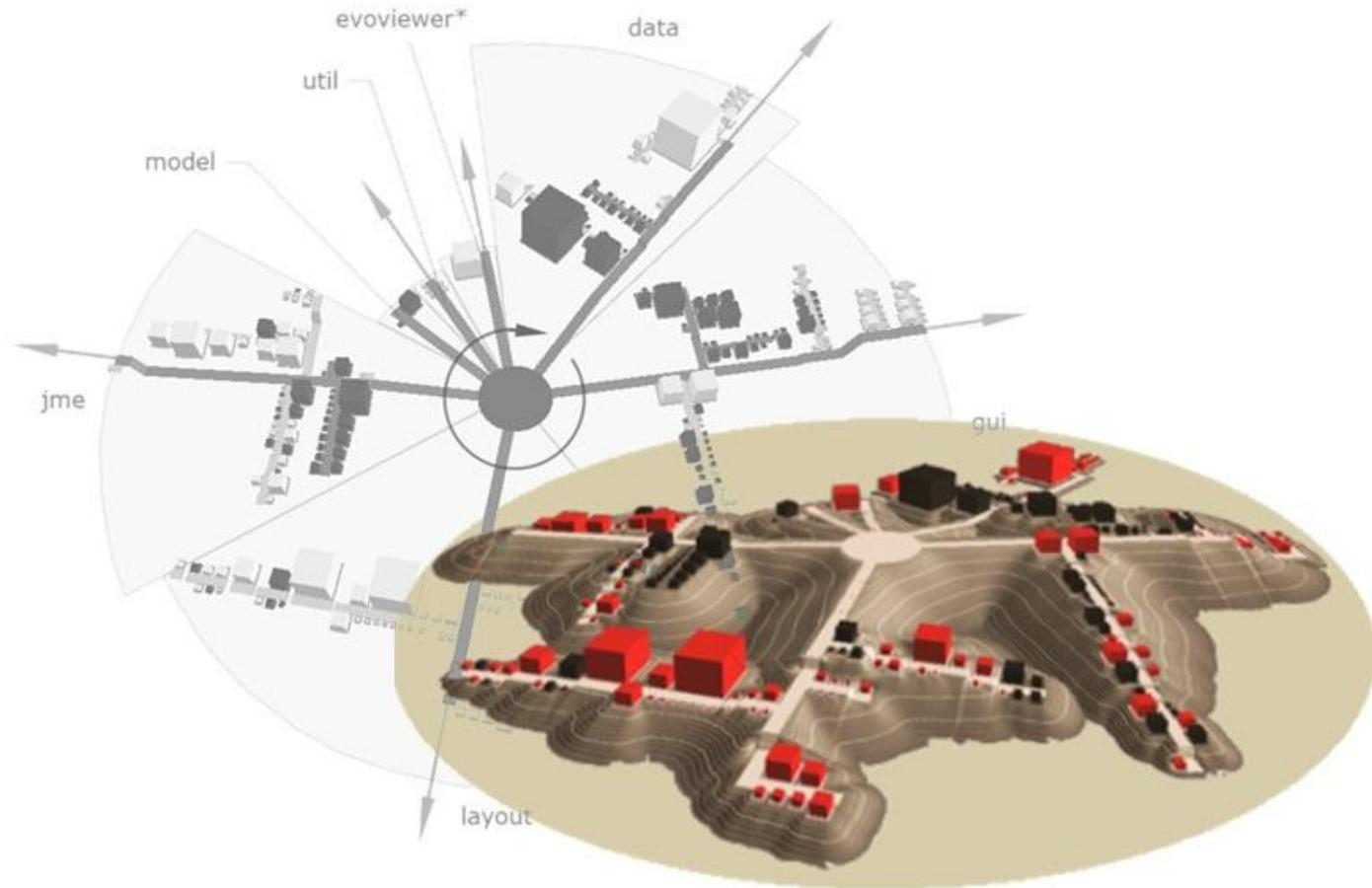


## maintainability



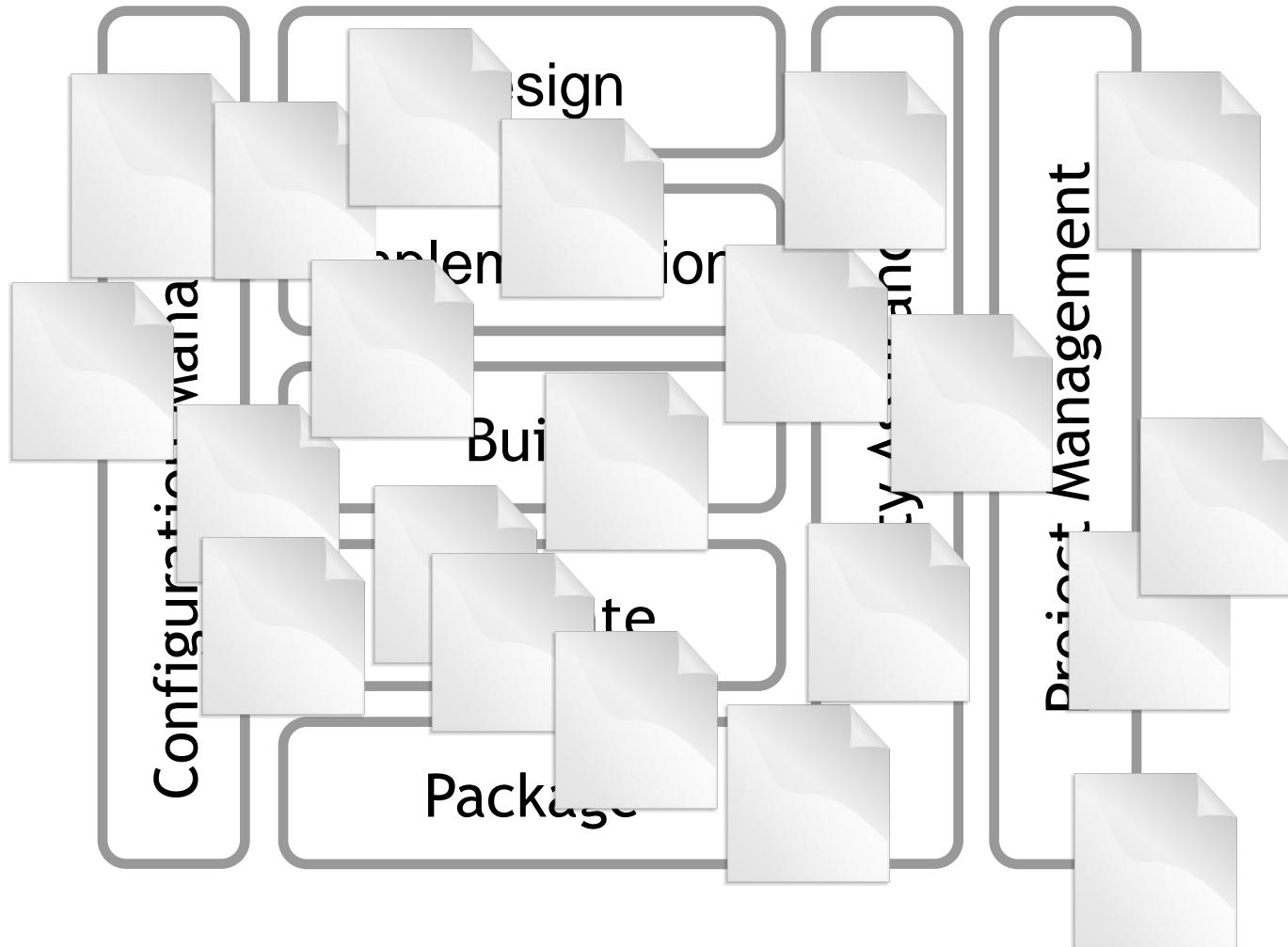
# Preservation is Communication

TIMELESS BUSINESS ◀ ▶ ▷



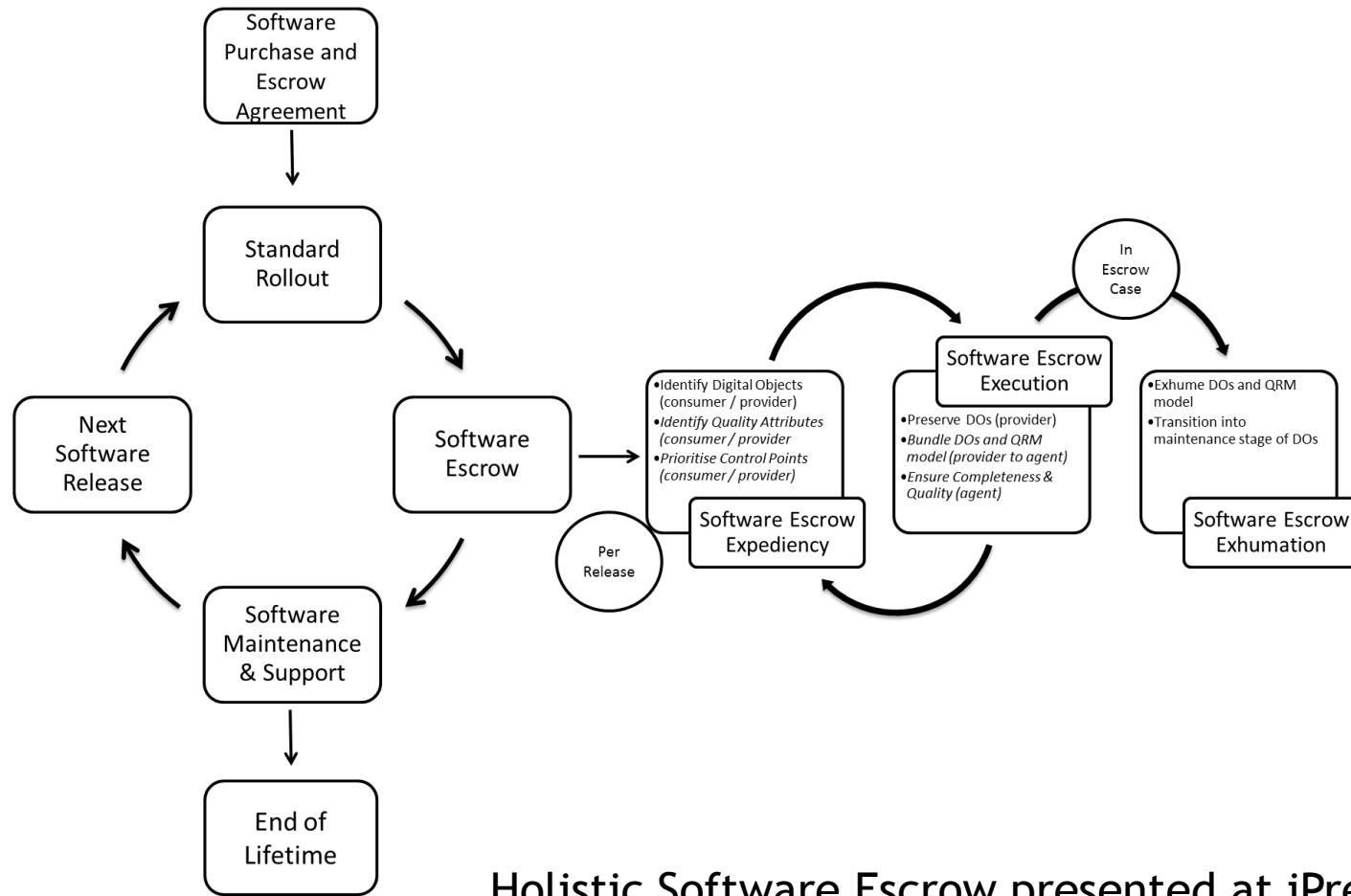
# SW is more than code

TIMELESS BUSINESS ◀ ▶ ▷



# DPreservation in a SDLC

TIMELESS BUSINESS ⟲ ⟳ ⟷



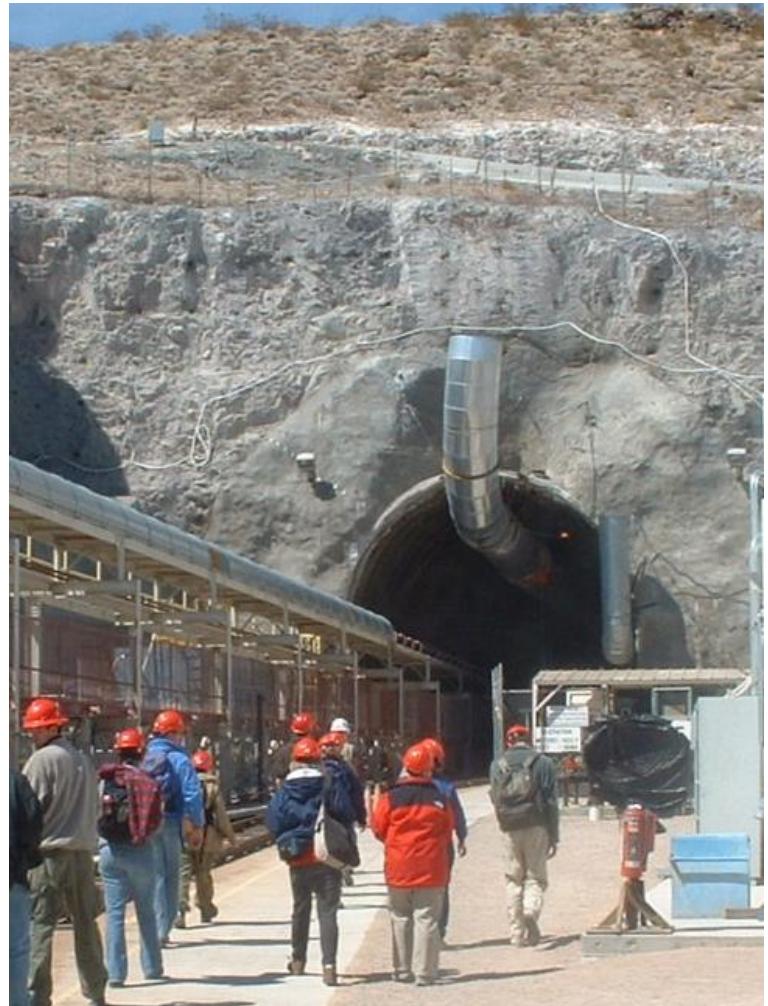
Holistic Software Escrow presented at iPres 2011

# Can we really preserve

TIMELESS BUSINESS ◀ ▶ ▷



- ...for more than 100.000 years



# Thank you for your attention!

TIMELESS BUSINESS ◀ ▶ ⊞



**José Barateiro (LNEC)**  
jbarateiro@lnec.pt

**Martin Alexander Neumann (KIT)**  
mneuman@teco.edu

**Stephan Strodl (SBA)**  
sstrodl@sba-research.com

**Daniel Draws**  
daniel.draws@sq.s.com

**[www.timbusproject.net](http://www.timbusproject.net)**